

SOME SOUTH AMERICAN CORIXIDAE.

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For many years the study of the South American Corixidae has been neglected. I have been gathering together material for the past ten years, and although there are still vast tracts from which I have no material, I feel that some progress should be reported. Three excellent papers by Dr. Tadeusz Jaczewski have appeared during the past year—the first one reporting the material he collected while a member of the Polish Zoological Expedition to Brazil in 1921–24. The first plate of drawings submitted with the present paper was prepared for the printer before I learned that Dr. Jaczewski was preparing a report. Upon hearing from him that his "Corixidae from the State of Paraná" would soon be published, I withdrew my paper from publication. I was interested to find that we had studied five species in common, and that out of eleven species figured on my plate, five were figured by him. Since my zinc cut was already made, I am using it here to delineate the six species not seen by Dr. Jaczewski.

In Dr. Jaczewski's "Argentinian Corixidae collected by Mr. A. C. Jensen-Haarup, 1927," are described *Sigara jensen-haarupi* and *Trichocorixa mendozana*. The former species is distinguished from related South American species by the absence of a strigil. In remarking upon the presence or absence of a strigil and its generic significance, I am credited, with others, with believing in the generic significance of this character. Attention might be called to the fact that several years ago I described as *Arctocorixa compacta* a species without a strigil.

The *Trichocorixa mendozana* Jaczewski is the first printed record of the genus in South America. I have had in my collections material from two or three South American republics for a long time. Central America and the Antilles abound with these insects. I have also species from Bermuda and Galapagos Islands. The species described as *Corixa blackburni* White and later assigned to *Arctocorixa* by Kirkaldy is a member of the *Trichocorixa* group. In commenting upon the species of *Trichocorixa*, Dr. Jaczewski notes that *Corixa sexlineata* Champion is a *Trichocorixa* and that the name *sexlineata* is preoccupied. His suggestion of a new name *T. championi* is not necessary, however, since Mr. Kirkaldy in 1908 renamed the species *C. naias*.

***Corixa williamsi* sp. n.**

Size: 6 mm. long. Females a little longer and males a little shorter.

Color: Trifle lighter than the medium, appearing shiny yet minutely rastrate when seen under the binocular. Pattern coarse. Cross bands of hemelytra slightly wavy. Pronotum crossed by five to seven pale bands that are about the same in width as the dark ones. Bands on middle of the disc somewhat split or even broken. Base of clavus paler than remainder of the hemelytra, the pale bands considerably broader than the brown ones in this area. The transverse bands of the middle of the clavus continuous with those of the corium. Pale bands slightly congested as they cross the tip of the clavus. Membrane pigment pattern of same general tone as other portions of hemelytra. Venter pale.

Structural characteristics: Interocular space broad. The anterior curve of the vertex, as viewed from above slightly projected in front of that of the eye. Facial depression of the male slight, margin ill defined. Metaxyphus elongate triangular. Female pala of usual form. Male pala as shown in Figure 12, Plate VII. Asymmetry left, strigil absent. A patch of hairs behind the customary position of the strigil.

Described from eight specimens—three males and five females—taken by Dr. F. X. Williams in Tunguragua Vale, Baños, Ecuador, January 1, 1923.

This is a most unusual species! I have quite tentatively assigned it to the genus *Corixa*. I have, besides the seven specimens, another adult male, and four nymphs. The male is beyond question an example of reversed asymmetry. The asymmetry is right, but in color pattern, absence of strigil, shape of pala and genital capsule, this insect is identical with those described.

***Arctocorixa rubyi* sp. n.**

Size: 6.5 mm. long.

Color: Of medium color tone. Thorax crossed by about seven dark bands which are slightly narrower than the intervening pale bands. Hemelytra pattern not barred except the anterior angle of the clavus. Pigment of even distribution in slender short vermiculate figures, on membrane as well as elsewhere. Underside of body pale except the basal abdomen segments which are cloudy.

Structural characteristics: Interocular space broad. Anterior curve of the vertex as seen from above plainly produced beyond the curve of the eye. Facial depression deep

attaining the eyes laterally. Anterior part of pronotum faintly carinate. Pronotum rastrate but hemelytra smooth. Metaxyphus truncate at tip. Strigil small, of four striae. Pala of male of usual form, fairly thick, and provided with a row of twenty-nine pegs, the distal half of which approach the upper outer margin of the pala (distal pegs much longer than the others). The clasper of the male genital capsule provided with broad retrorse barbs as shown in Figure 5, Plate VI.

Described from two males and two females taken by Miss Ruby Hosford in 1923, Buenos Aires (Mercedes), S. A.

A. rubyi var. *schadei* var. n.

This is very near the species described above. The male pala appears less carinate on the back, and thinner, and the clasper of the male is slightly, but consistently, different as shown in Figure 8, Plate VI. I have a series of these insects from Paraguay, taken by F. Schade.

Arctocorixa hosfordi sp. n.

Size: 5.5 mm. long, females slightly larger.

Color: Darker than preceding species. The seven brown bands of the pronotum broader than the pale ones. Pigment pattern showing a predominance of the dark over the light, light figures short irregular blotches, arranged very faintly into longitudinal series. Basal part of clavus banded.

Structural characteristics: Distinguished from the preceding species by the short, thick pala of the male. Interocular space of male less than the width of an eye. Anterior curve of vertex as seen from above projected somewhat beyond the curve of the eyes. Slight median carina on head. Metaxyphus short, blunt. Strigil as in preceding species. Male genital capsule as shown in Figure 6, Plate VI. Pala bearing 28 pegs in a row that arises near the lower base and extends near to the upper distal margin where it curves down transversely.

Described from four specimens taken by Miss Hosford at Mercedes, Buenos Aires, S. A.

Arctocorixa denseconscriptoidea sp. n.

Size: 6 mm. long.

Color: Of usual color, colors distinct. The seven dark bands of pronotum clear cut, as wide as the pale ones. Hemelytra not barred. Base of clavus with broken transverse bands. Pigment elsewhere of about equal distribution of

light and dark short twisted and furcate figures in faintly longitudinal series. Venter pale.

Structural characteristics: Males with vertex connate as seen from above, low median carina. Facial depression deep, narrow and well marked. Male pala longitudinally carinate on the back. Palar pegs 23 in number arranged in the usual curve. Metaxyphus rather long and broadly rounded at tip. Strigil of moderate size, longer than broad, of four broad striae. Male genital capsule as shown in Figure 10, Plate VI.

Described from 21 specimens taken at São Paulo, Brazil, by R. Spitz.

Notes: This species is the most readily recognized species I have seen in all of this group of South American Corixidae.

Arctocorixa chrostowskii var. **brachypala** var. n.

Size: 5.9 mm. long.

Color: Somewhat darker than the normal. Seven brown bands that are broader than the pale ones on the pronotum. Hemelytra markings without characterization that would distinguish this species from the others.

Structural characteristics: This species has a short, broad male pala strongly curved forward at tip. The pala is thin but provided with a short longitudinal carina on the back. Strigil of medium size, round, of four striae. Metaxyphus short, broadly rounded. Male pala and male genital capsule as shown on Plate VII, Figures 3 and 6.

Described from material taken by E. D. Townsend, São Paulo, Brazil.

Arctocorixa chrostowskii var. **townsendi** var. n.

Size: 5.2 mm. long.

Color: Darker than the above species. The five or six pale bands on pronotum slender. The six brown bands well marked. Hemelytra pattern as in species above.

Structural characteristics: Besides being a smaller species than the preceding, the anterior curve of the vertex as seen from above is slightly sharper, making the head appear a little longer. The figures on Plate VII (Figures 4 and 5) show the differences between this species and the preceding. For some time I considered the two varieties of one species because the male claspers are very close. A careful comparison will show the differences which in some of the related species would be within the range of specific variability.

Described from material taken by E. D. Townsend, São Paulo, Brazil.

Arctocorixa fazi sp. n.

Size: 8 mm. long.

Color: Normal for the family. 7 dark bars on pronotum. The hemelytra not barred, the pigment of about even distribution in brown and pale vermiculate figures.

Structural characteristics: This is the largest form of these related South American species. The head is short, the anterior curve of the vertex continuing that of the eyes. Interocular space broad but not quite as wide as an eye. Facial depression of male not deep or well marked. Pronotum and clavus minutely rastrate. Pronotum with faint median longitudinal carina. Metaxyphus of normal length but broadly rounded at tip. Strigil of male elongate of 6 or 7 narrow striae. Male genital capsule as shown in Plate VI, Figure 12. The pala of male is elongate with upper and lower margins nearly parallel. About 32 pegs in the row.

Described from a long series collected by A. Faz, on various dates. The holotype labeled as follows: Termas Cauquenes, Chile, S. America, Dec. 15, 1922. Alfredo Faz.

Arctocorixa fazi* var. *termasensis var. n.

This variety is smaller than the species described above. The maculations on the hemelytra are coarser and the male genital claspers are different though of the same general type. The shape of the male pala and the position of the row of pegs is distinctly different and readily separates this form from the much more abundant *A. fazi*. Since this form was taken at the same place and on the same date, I consider that these two may not be entirely distinct species.

Arctocorixa santiagiensis sp. n.

Size: 6 mm. long.

Color: The color pattern of somewhat finer figures than in *A. forciceps* Spin. The six or seven dark bands of pronotum less broken than in *A. forciceps* Spin.

Structural characteristics: While I confused this species with *A. forciceps* Spin. for a time, the metaxyphus is considerably more elongate. The interocular space is greater, the upper margin of the male pala more evenly curved, the pegs more numerous (39 in number) and basal ones smaller in size. The shape of the clasper of the male genital capsule as shown in Plate VI, Figure 1, is quite distinctive.

Holotype specimen from Santiago, Chile, South America, Alfredo Faz (No. 25123). A number of other males from same locality were dissected and found to agree with the type.

I am quite aware of Dr. F. Schumacher's contention (in *Ento. Zeitschr.*, Berlin, 1924) that *Sigara* must have precedence but this involves more changes in nomenclature than seem advisable at this time. Dr. Jaczewski has accepted the restored *Sigara* and has placed his new South American species under that name (Corixidae from the State of Paraná, *Annales Zool. Mus. Polonica Historiae Naturalis*. I. VI. 1927).

As a matter of fact, this group of South American corixids has a general facies and a bizarre type of right genital clasper that makes it questionable whether they should be assigned to the same group with any old world species.

PLATE VI.

- Fig. 1. *Arctocorixa santiagiensis* sp. n., genital capsule of male.
Fig. 2. *Arctocorixa czakii* (Jaczewski), genital capsule of male.
Fig. 3. *Arctocorixa forciceps* (Spin.), genital capsule of male.
Fig. 4. *Arctocorixa hungerfordi* (Jaczewski), genital capsule of male.
Fig. 5. *Arctocorixa rubyi* sp. n., genital capsule of male.
Fig. 6. *Arctocorixa hosfordi* sp. n., genital capsule of male.
Fig. 7. *Arctocorixa chrostowskii* (Jaczewski), genital capsule of male.
Fig. 8. *Arctocorixa rubyi* var. *schadei* var. n., genital capsule of male.
Fig. 9. *Arctocorixa denseconscripta* (Breddin), male clasper.
Fig. 10. *Arctocorixa denseconscriptoidea* sp. n., genital capsule of male.
Fig. 11. *Arctocorixa denseconscripta* (Breddin), genital capsule of male.
Fig. 12. *Arctocorixa fazi*. sp. n., genital capsule of male.

PLATE VII.

- Fig. 1. *Arctocorixa dita* (Jaczewski), pala of male (specimen det. by Jaczewski).
Fig. 2. *Arctocorixa dita* (Jaczewski), genital capsule of male, specimen det. by Jaczewski.
Fig. 3. *Arctocorixa chrostowskii* var. *brachypala* var. n., genital capsule of male.
Fig. 4. *Arctocorixa chrostowskii* var. *townsendi* var. n., pala of male.
Fig. 5. *Arctocorixa chrostowskii* var. *townsendi* var. n., genital capsule of male.
Fig. 6. *Arctocorixa chrostowskii* var. *brachypala* var. n., pala of male.

- Fig. 7. *Arctocorixa fazi* var. *termasensis* var. n. (by Faz in Chile). Pala of male.
- Fig. 8. *Arctocorixa jensen-haarupi* (Jaczewski), right clasper of male. Copied from the author.
- Fig. 9. *Arctocorixa jensen-haarupi* (Jaczewski), male pala, copied from the author.
- Fig. 10. *Arctocorixa fazi* var. *termasensis* var. n. (by Faz in Chile). Genital capsule of male.
- Fig. 11. *Corixa williamsi* sp. n., genital capsule of male.
- Fig. 12. *Corixa williamsi* sp. n., pala of male.
- Fig. 13. *Corixa williamsi*, sp. n., genital capsule of a male, showing reversed asymmetry.
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Blaps mucronata Latr. in Cincinnati, O.—May 23, 1927, this Tenebrionid beetle was first observed running over the unpaved portion of the cellar floor of the Cincinnati Society of Natural History Museum Building, Cincinnati, Ohio.

A survey of many cellars in the city reveals that they also have been invaded by this European species. A large Grainery across the Ohio River in Covington, Ky., is swarming with them, in company with *Tenebrio*, etc. Specimens sent to Museums and Coleopterists have been reported as new to them.

Dr. Blaisdell, in his Eleodiini paper (Bull. U. S. Nat. Museum No. 63—P. 502), refers to the occurrence of *Blaps* in the U. S.

I have taken at Cincinnati, Ohio—another European beetle, viz., *Anommatus 12-striatus* Muls, one specimen. This curious little species was on the ground under a pile of cut lawn grass. No additional specimens have been found.

I am indebted to Mr. Herbert S. Barber, of the U. S. Nat. Museum for the identification of these two species.

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